Draft Meeting Notes
CALFED Bay-Delta Program Levees and Channels Technical Team
January 25, 2000 at 9:00 am in Room 715 of the Resources Building

Attendance List:

Margit Aramburu, Delta Protection Commission
Bill Betchart, private consultant
Tracie Billington, CALFED
Lori Clamurro, Delta Protection Commission
Steve Chappell, Suisun Resource Conservation District
Robert Clark, CCVFCA
Rob Cooke, CALFED (chair)
Gil Cosio, Murray Burns and Kienlen
John DeGeorge, RMA Consultants
Chris Enright, DWR ESO
Dennis Fox, private citizen
Kamyar Guivetchi, DWR ESO
Kate Hansel, CALFED
Mike Hardesty, RD 2068
Gwen Knittweis, CALFED
Gil Labrie, DCC Engineering
Ed Littrell, Fish and Game
Arnold Lenk, Suisun Resource Conservation District and RD 2127
Ulrich Luscher, Woodward Clyde Engineering
Chris Neudeck, Kjeldsen Sinnock and Neudeck Inc.
Michael Norris, DWR Central District (minutes)
Lynn O'Leary, CALFED/Corps of Engineers
Richard Rachiele, RMA Consultants
Michael Ramsbotham, CALFED/Corps of Engineers
Curt Schmutte, DWR Central District
Sally Shanks, Staten Island
Ward Tabor, DWR Legal Office
Tom Zuckerman, Central Delta Water Agency

Rob Cooke convened the meeting and had the group introduce themselves. The meeting minutes from the 11-10-99 CALFED Levee and Channel meeting were reviewed and approved with minor changes. The comment by Chris Neudeck regarding $25,000 in permit fees for a $10,000 project was changed to refer to $25,000 in permitting, testing, and engineering costs for a $100,000 project. Comments on the way USFWS handled Dick Daniel as well as the Levee and Channel Technical Team getting the attention of the CALFED Policy Group were toned down a bit.

Tracie Billington led the agenda item dealing with the Mokelumne–Cosumnes Watershed Alliance (MCWA). Margit commented that the North Delta area in the CALFED Environmental Restoration Plan (ERP) is different than the MCWA area of interest.

There were several overheads shown including:
•List of various projects underway
•MCWA Objectives: A good one is the desire to facilitate and optimize resources.
•MCWA Principles
•MCWA Sub-groups: Sub-groups include stakeholder outreach, GIS, Modeling, and Internet Website.
•Mission Statement

Tom Zuckerman commented that Laguna developers had not provided any land for flood control because they initially said it wasn't needed. Now there is concern about flows moving downstream when we really should be starting in the Delta and moving upstream from there. Sally Shanks and Dennis Fox had some comments on the Morrison Creek watershed and the hydraulic change from conversion of pastures to vineyards, respectively. Sally noted the Corps did a study of the San Joaquin River going up into the Morrison Creek watershed when traditionally it went into the Sacramento River. Tom noted it was assumed the levees would fail before the Laguna area would flood and now levee integrity is improving in some cases. Gwen discussed the legal issues with levee height raising and the hydraulic impacts from that and called on Ward for comments from a legal perspective. Ward noted there are whole layers of laws that apply and, to complicate matters, it is not known how to apply FEMA regulations of one community's flows affecting the next downstream community. Sally noted that we are reducing our options for solutions and the concept of a moratorium on building in some areas is not such a far-fetched idea.

Tracie announced that the next MCWA meeting will be a public meeting scheduled for the evening in March of 2000.

Gwen Knittweis led the agenda item dealing with the North Delta Improvement Group. A copy of the white paper was passed out. There was an overhead for the assorted tasks for the group which include having a consultant prepare implementation and convene the regulatory team and meeting the June 2000 target date for EIR/EIS preparation. Another overhead outlined the sections of the white paper. Gwen noted that the modeling was done with and without Sacramento County Alternative 11F. Gwen also briefly reviewed the various alternative configurations such as bypasses and channel dredging and levee raising. Tom had a question on the frequency of flooding for the Staten Bypass option and it was noted it was a 10-year or less frequency contingent on development. Chris Neudeck asked about the difference between the stage for the 10-year and 100-year event and Gil Cosio thought it was 4-feet at New Hope. Sally and Chris discussed what happened in 1986 when Tyler Island flooded. Chris didn't think the river stage went down that much when it happened.

There was a discussion of the North Delta Improvements Scenarios Evaluation matrix along with a call for comments before the next 2-16-2000 North Delta meeting. Ulrich Luscher asked whether "conveyance" was part of the white paper in reference to "Alternative 2" that has been proposed by the CALFED Conveyance group. It was noted that there are not direct linkages with that group and that needs to be further developed.

Gwen wrapped up the discussion on this agenda item by discussing the goals and tasks of the MCWA Modeling sub-group, which was included in the agenda packet.

Lynn O'Leary led the agenda item dealing with an update of the seismic report. The report is nearly final and complete and ready to go to print. The only sections that remain to be finalized are the Executive Summary and the Press release.

Kate Hansel led the agenda item dealing with the proposed CALFED Governance. The purpose of the proposal is to determine what institutional structure should be put in place for the time it takes to construct a CALFED project such as the next 30 years or so. A summary was included in the agenda packet. Tom wondered how we can expect the commission members to act if they cannot act on behalf of their agencies or should we assume their agencies would follow their lead. Kate answered that we should assume there would be coordination along the way. Ward wondered if the model should be like the Federal Energy Regulatory Commission (FERC) where people have a full-time job on the commission. Tom wondered if this proposed governance would subvert the regulatory process or hamper the enforcement process. Dennis Fox wondered if anyone had looked at the Coastal Commission to get an example of a model and Kate answered that several models were looked at for examples such as TRPA and BCDC. Kate reviewed the 15 Principles of the Governance Proposal and there was discussion of Principle 12 dealing with the proposed new ERP entity. Sally noted we are moving further away from multiple use with implementation of the ERP but Rob thought it might have the opposite effect. Ed noted the goal is not to build vegetation on levees but rather to build "vegetative corridors" which approaches what we had a couple hundred years ago. Robert Clark noted we have no provision for local membership in Principle 4 but Kate thought they may fit in under "public members". Bill Betchart wondered if everyone on the commission had an axe to grind and where we might find people who understand the big picture. Kamyar thought the commissioner should be an "arbitrator". Dennis thought that a newsletter would be useful to inform people of this governance. Michael Norris wondered if changing BDAC from an advisory board to an enforcement board would achieve the same thing that the proposed governance is trying to do but Kate said that wouldn't work because we need to have the regulatory agencies there as members. Kamyar discussed how the "OMR" process was used in the 97 and 98 floods to get federal agency participation and we need to refer to that process and not just the Corps of Engineers involvement under State and Federal Agency Authorities and Responsibilities as it applies to Levee System Integrity. Similarly, Ed Littrell discussed how DFG needs to be listed on the State side in the same section and not just the reference to DWR. Chris Neudeck discussed how an annual program like Subventions and Special Projects should not come before the commission for approval in addition to being approved by the Water Commission, the latter, which already happens. Approval needs to occur quickly in some instances and having to go before a CALFED Governance in addition to the Water Commission for approval will slow things down.

Rob Cooke led the agenda item dealing with the Central Delta Water Agency letter. A copy is included in the agenda packet. The letter recommends one of three actions be taken for Corps participation on non-project levees in the Delta. Rob indicated that he is

coordinating with Tim Ramirez of the Resources Agency to prepare a response to the letter. Tom Zuckerman indicated that he had spoken to Tim about the letter. Tom said that Tim was working with Agency management to see if one of the actions could be taken.

Chris Enright led the agenda item dealing with an update of the Suisun Marsh Levee Investigation. There were several excellent overheads shown including:
•Analysis Chronology: Post modeling was done after the 1998 floods. A team was formed for this. RMA Consultants was selected to do 2-dimensional modeling to corroborate the results that DWR's 1-dimensional modeling had shown. There will be additional DWR modeling done using RMA's approach.
•Contributing Factors of 1998 Flood: Factors include ENSO currents, storm winds, low barometric pressure, high spring tides, and high Delta outflow.
•Levees were breached and/or overtopped in 60 locations.
•There were 11 major breaches of exterior levees. 19,000 acres were inundated and there were 85,000 acres of tidal prism expansion.
•Modeling Approach: The approach was to simulate the hydrology from the 1991-92 drought year and overlay the February 1998 flood geometry on top of that. In addition, there is a No-Action scenario where we allow the breaches to expand to 23% of the Suisun Marsh exterior levee perimeter for a total of 16,000 feet of levee openings.

There was a sequence of plots shown for the various levee breach scenarios and the salinity that was expected to occur. Martinez is the most downstream location for analysis. Wider breaches tend to result in much higher salinity. There is not much difference for a 100-foot levee breach at Collinsville but there is major difference for an uncontrolled breach. Other points yield varied results. Rio Vista for example would show a salinity reduction for either a narrow or wide levee breach whereas Jersey Point would show a salinity reduction for a narrow breach but a major increase in salinity for a wide breach. In general, the tidal range envelope was compressed for the Sacramento and San Joaquin Rivers.

Chris felt that the charge for the Levee and Channel Technical team should be to determine whether or not the Suisun Marsh levees should be included in the CALFED program and whether or not there are opportunities for water quality improvements and ecological restoration.

Chris reviewed the DWR DSM1 modeling approach that included the following assumptions:
•ERP shallow water habitat = 2,000 acres
•ERP tidal range area = 5,000 acres
•Base Case was the 1991-92 drought year
•Comparing the base case to 6 water quality habitat breach scenarios and 4 tidal marsh breach scenarios
•Each scenario was run with 2 breach sizes 100' wide by 20' deep and 5,000' wide by 3' deep

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The caveats for the above analysis included the following:
•Pond elevations decreased from 0.3' to 1.5'
•A constant pond elevation bottom is assumed
•Output is presented for the worst - case drought conditions
•Modeling is based on 20' deep breaches although recent breaks of 25' deep have occurred in the upper marsh

Chris noted that all modeling results are posted on the web site. The date 7-29-92 was selected as an example to plot. Notable conclusions based on the modeling include:
•Salinity responses are sensitive to breach size and location
•Regional salinity increases occur when breaches are adjacent to deep energetic channels
•Wide breaches increase salinity everywhere
•The maintenance of bay levees in the marsh is critical
•Levee breaches off the main axes of the estuary tend to produce salinity reductions in the Delta
•There is a need for further modeling corroboration

RMA consultants John DeGeorge and Richard Rachiele followed up Chris Enright's presentation with one of their own. They noted that their model required much more computer time than the DWR model. The model is spatially explicit over USGS ortho-photographic quads and bathymetry data. The fall of 1998 study was used for flow measurements. In response to a question from Dennis Fox regarding stratification of salt and fresh water into layers above one another, the consultants noted that phenomena was discounted for the use of this model. The levee breach simulations resulted in model configurations, boundary conditions, salinity results, and a comparison of salinity impacts. The spring period of 1992 was used for the model run and included a four-month simulation. The results were similar to DWR results and showed that the following two competing mechanisms appear to be at work:
•Inundation of formerly dry areas dissipates tidal energy and reduces tidal range everywhere else.
•When there is asymmetry between tidal flows inside and outside of levee breaches, salinity can be trapped upstream.

Observations and conclusions include:
•The RMA model was significantly improved over the older versions of it
•First level calibration is reasonable
•Salinity impacts of levee breaches of 20' depth were comparable between the RMA and DWR models
•Reduction in tidal range and flows tend to reduce mixing of salt into the Delta
•Tidal trapping tends to increase mixing of salts in the Delta

The presentation was followed up by a few questions. Margit asked about salinity increases in the marsh and Kamyar and Steve Chappel attempted to answer the question. Gwen pointed out that the sub-group for biologists had yet to review the impacts. Time had run out and those from the group that had further questions were invited to stick around after scheduling of the next meeting for further questions and answers.

Rob scheduled the next meeting of the CALFED Levee and Channel Technical Team for Wednesday March 29, 2000 from 9-12.

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